

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau

(43) International Publication Date  
6 December 2001 (06.12.2001)

PCT

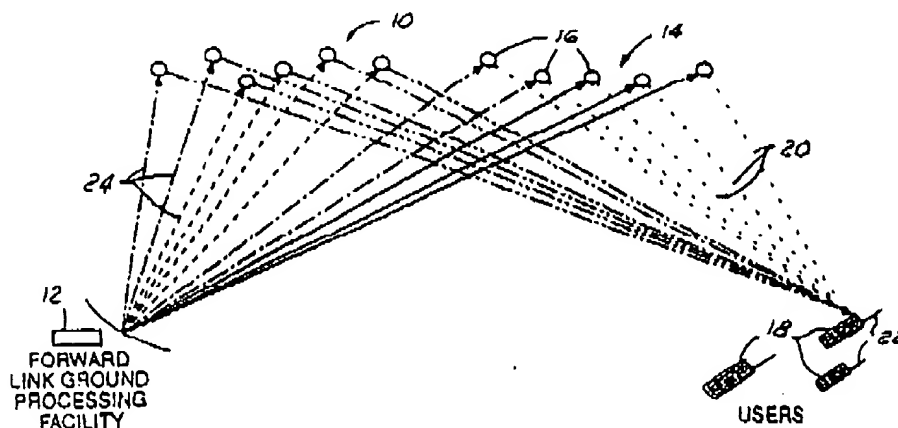
(10) International Publication Number  
**WO 01/93458 A2**(51) International Patent Classification: **H04B 7/185**(21) International Application Number: **PCT/US01/15388**(22) International Filing Date: **11 May 2001 (11.05.2001)**(25) Filing Language: **English**(26) Publication Language: **English**(30) Priority Data: **09/584,012 30 May 2000 (30.05.2000) US**(71) Applicant: **HUGHES ELECTRONICS CORPORATION** [US/US]; 200 North Sepulveda Boulevard, El Segundo, CA 90245 (US).(72) Inventors: **CHANG, Ming, U.**; 28815 Indian Valley Road, Rancho Palo Verde, CA 90275 (US). **YUNG, Kar,**W.; 4738 Narrot Street, Torrance, CA 90503 (US). **HAGEN, Frank, A.**; 2309 Via Rivera, Palos Verdes Estates, CA 90274 (US). **CHANG, Donald, C., D.**; 2350 Moberly Court, Thousand Oaks, CA 91360 (US).(74) Agents: **DURAI SWAMY, Vijayalakshmi, D. et al.**; Hughes Electronics Corporation, Building 001, MS A109, P.O. Box 956, El Segundo, CA 90245 (US).

(84) Designated States (regional): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).

**Published:**

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **MULTI-NODE WIRELESS COMMUNICATION SYSTEM WITH MULTIPLE TRANSPONDING PLATFORMS**

(57) Abstract: A mobile wireless communications system (100) including a plurality of individual transponding platforms (16, 104, 106, 108) all in communication with a central processing hub (102). A signal processed by the central processing hub (102) is radiated simultaneously through multiple paths to a plurality of the individual transponding platforms (16, 104, 106, 108). The signal transmitted to each transponding platform (16, 104, 106, 108) by the hub (102) is appropriately delayed by the hub (102) so as to equalize the differential delay of all such signals from a given receiver location. The radiated signal is then re-radiated by each of the plurality of individual transponding platforms (16, 104, 106, 108) to a mobile satellite terminal (112) that receives the re-radiated signal from the plurality of individual transponding platforms (16, 104, 106, 108). The signals from the plurality of transponding platforms (16, 104, 106, 108) are all received coherently by the intended user (112), and incoherently by all other users.

WO 01/93458 A2